Steele's Mill Dam Removal

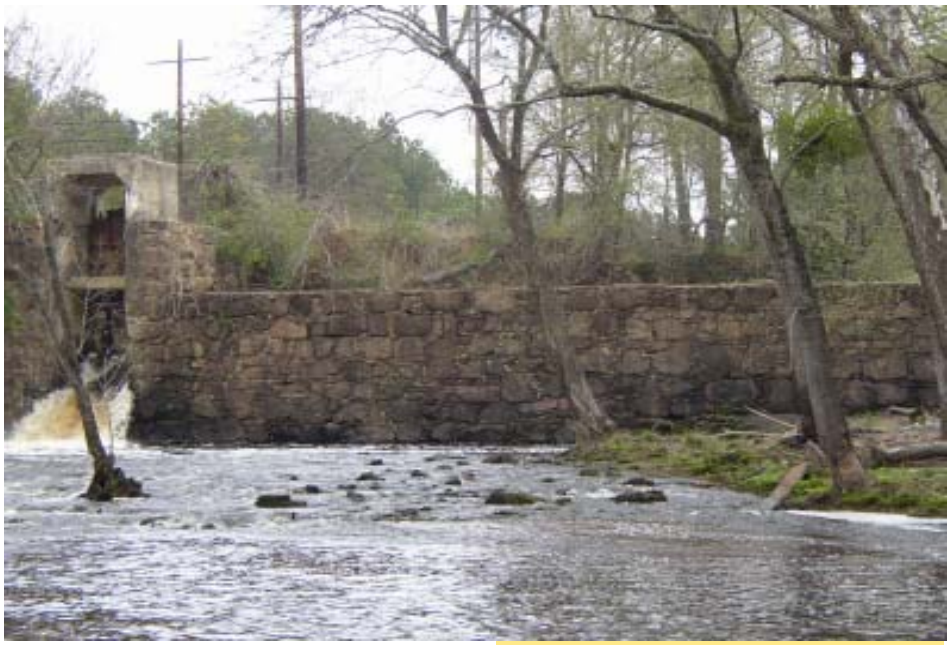
Rockingham, North Carolina

Highlight:
Hitchcock Creek

Populations of diadromous fish, such as shad, herring, and sturgeon have declined over the years due to a variety of factors, including the loss of habitat. Barriers to migration, such as dams are a major cause of this loss. Dams have a devastating impact on diadromous fish by impeding their upstream and downstream migration, thereby blocking important spawning, feeding, and rearing areas. Dams can also cause a decline in the quality of riverine habitat by increasing predation, altering chemistry and flow patterns, increasing water temperature, and reducing available flow downstream.

While many existing dams provide important services, such as water storage and power generation, there is an ever-increasing population of structures that are either abandoned or have ceased operation. Removal of these derelict structures presents an opportunity to provide a significant increase in vital habitat for diadromous fish.

Taking a step in this direction, the NOAA Restoration Center, in partnership with the City of Rockingham, the North Carolina Department of Water Resources, and other resource agencies, is taking the lead on the removal of Steele's Mill Dam near Cordova, N.C. This 110 year old dam is a 100-foot wide by 15-foot tall stone gravity structure situated on Hitchcock Creek, approximately one mile upstream from the creek's confluence with the Pee Dee River.



In 1999, the dam ceased power generation and the reservoir behind the dam was drawn down to its current size of .33 acres. Since that time, a 20-foot wide channel above the dam has reformed and the surrounding banks of the former impoundment have stabilized and become covered with dense vegetation. In 2001, the Federal Energy Regulatory Commission (FERC) issued an exemption from licensing to operate a power generating facility.

Historic records indicate that American shad and American eel lived within Hitchcock Creek. Other species, such as hickory shad, striped bass, Atlantic sturgeon, and the federally-listed shortnose sturgeon migrate up the nearby Pee Dee River annually. Removal of this dam, which is the first blockage on Hitchcock Creek, will open access to approximately 15 miles of riverine habitat, providing an opportunity for the migration of these diadromous fishes and numerous other aquatic

GOAL

Restore diadromous fish runs for hickory shad, striped bass, Atlantic sturgeon; enhance a natural and cultural resource for the citizens of Rockingham, NC

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National Oceanic and Atmospheric Administration

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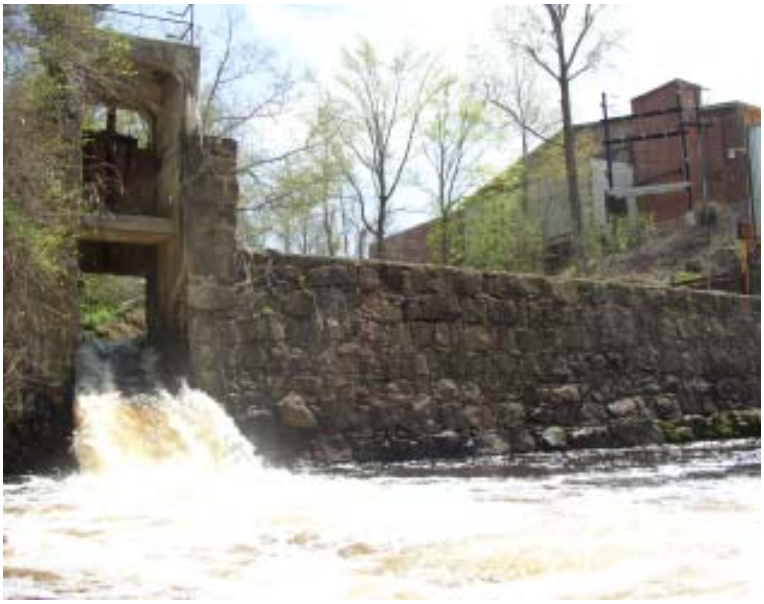
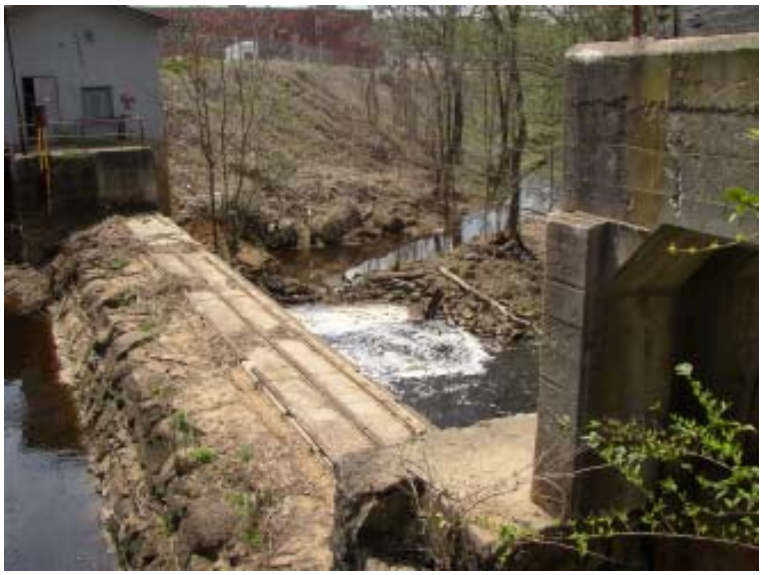
organisms while at the same time restoring the ecological services synonymous with an unimpeded river.

Currently, the NOAA Restoration Center is conducting a design and engineering study that will assess the feasibility of removing the dam. If deemed appropriate, the State of North Carolina has committed to funding the actual dam removal through its competitive bid process. This project is one element of a larger vision advanced by the local community to enhance the Hitchcock Creek Watershed. To complement this project, local interests are developing a comprehensive water quality enhancement plan and the City of Rockingham has intentions to acquire and restore the 90-acre impoundment behind the dam, develop public access, and construct a city park. Additional restoration initiatives within the Hitchcock Watershed are being considered, including the prescription of fish passage at Midway Dam, which lies two miles upstream from Steele's Mill Dam.



Steele's Mill Dam, North Carolina



View from atop the dam

PROJECT PARTNERS:

- **City of Rockingham**
- **North Carolina Department of Water Resources**